



An
Bord
Pleanála

Inspector's Report ABP-301112-18

Development	Change of use from residential unit to commercial souvenir/coffee shop use.
Location	Reek Cottage, Reek Road, Murrisk, Co. Mayo.
Planning Authority	Mayo County Council
Planning Authority Reg. Ref.	P17/224
Applicant(s)	Mary Coffey
Type of Application	Permission
Planning Authority Decision	REFUSE
Type of Appeal	First Party
Appellant(s)	Mary Coffey
Observer(s)	None
Date of Site Inspection	21/06/18
Inspector	John Desmond

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1.0 Site Location and Description

- 1.1. The site is located within the small, dispersed rural settlement of Murrisk at the foot of Croagh Patrick, c.68m south of the Westport to Louisburgh Road. The application site has a stated area of 0.0429ha or 429-sq.m in area. It is accessed off a small rural lane (a cul-de-sac bounding the east of the site) that would appear to be a main route to Croagh Patrick, with no entrances to the site via the other site boundaries. To the west of the site is a reasonably large surface car park associated with Croagh Patrick; to the north, the site is adjacent a public toilet block; and to the south there is a footpath from the car park connecting to the mountain route. There are a number of permanent and kiosk-type commercial premises in the vicinity.
- 1.2. The site slopes slightly from south down to north. It is bounded on three sides by a stone walls of c.1.8m in height, and by a wall of c.600mm height to the rural lane to the east, except on the northern section where is it open. A significant open stream runs south to north to the east of the site, crossing under the lane in front of the site and through the northeast corner of the site in an enclosed culvert.
- 1.3. There is an existing, single-storey cottage on site with a footprint of c.100-sq.m. It has been subject of significant renovation, extension works which remain incomplete. These include an apparently new or replacement rear return (west), new / amended opes on the southern elevation. Other works, which may have been carried out recently, as part of the current development, or several years back, include a front porch, uPVC windows, retiled roof and renovated chimney stack. An unfinished stub wall has been erected inside the west and south boundary walls adjacent the dwelling.

2.0 Proposed Development

- 2.1. It is proposed to
 - (i) change the use of the structure from a residential dwelling to use as a commercial souvenir / coffee shop with associated food prep area,
 - (ii) new toilet block extension and wastewater treatment system;
 - (iii) new well for potable water to be treated by UV treatment system (brochure for VIQUA UV Disinfection Systems attached);

- (iv) Infill over stream;
- (v) Provision of new external seating to side of coffee shop and new pedestrian access from existing local authority car park;
- (vi) 4no. external Omni lit signs to the sides of existing building.

2.2. Further information

11/08/17 - Report, '*Response to Request for Further Information*', prepared by Aquafact, containing – (i) overall response including reference to proposal to install BioCell-QuickOne+ treatment unit with a PL-UV1 UV disinfection system (details appended) to treat domestic waste; (ii) appropriate assessment stage 1 screening assessment; (iii) CEMP (12 lines); (iv) IFI consultation and Clew Bay Designated Shellfish impact assessment. No material amendments to proposed development.

13/09/17 – Revised site notice for submission of significant further information.

15/11/17 – Letter indicating the applicant's wish to avail of additional time period for return of further information.

15/11/17 – Report, '*Response to a Request for Further Information*', prepared by Aquafact, containing, inter alia – (i) overall response including reiterating proposals to install BioCell-QuickOne+ treatment unit with a PL-UV1 UV disinfection system (details appended) to treat domestic waste, but it also refers to a possible alternative of connecting to the public wastewater system (request sent to Director of Services but no response received at time of submission of response); a stage 2 Appropriate Assessment.

Drawings G11 PL-050 and G11 PL-051 alternative options for foul drainage.

15/01/18 – Site Characterisation Report, trial hole evaluation and design treatment specification prepared by James Langan, Langan Consulting Engineers, and details of an alternative WWTS model (Solido Smart).

3.0 Planning Authority Decision

3.1. Decision

To **REFUSE** permission (08/02/18) for 2no. reasons relating to:

- (i) Threat to public health arising from proposed WWTP non-compliant with EPA CoP;
- (ii) Uncertainty of potential effects on a European site, Clew Bay SAC and on Clew Bay Designated Shellfish Area.

The Planning Authority sought **FURTHER INFORMATION** (19/05/17) concerning the submission of (i) an assessment under Article 6 of the Habitats Directive in view of the proximity (300m) and connectivity of the development to Clew Bay SAC; (ii) revised WWT proposals for discharge of treated effluent to an adequately sized percolation area on site in view of the connectivity to Clew Bay SAC via Carrowkeeran stream and the assimilative capacity of the said stream; (iii) an Environmental Construction Management Plan, including proposed infilling of the stream.

The Planning Authority sought **CLARIFICATION** (09/10/17) of further information concerning submission of (i) wastewater treatment proposals including option of discharge to adequately sized percolation area, or an alternative proposal for disposal of treated effluent; (ii) a Stage 2 Appropriate Assessment and Natura Impact Statement.

Letter (07/11/17) asking the applicant if they wish to avail of additional period within which to submit further information.

The Planning Authority sought **FURTHER CLARIFICATION** (11/12/17) requesting submission of a site suitability report and results of trial hole and percolation tests as per EPA CoP 2009

3.2. **Planning Authority Reports**

3.2.1. Planning Reports

The **third and final report** of the Council's Planning Officer (08/02/18) considered the proposed development to generally be appropriate, acceptable and compliant with the proper planning and sustainable development of the area, but that the development cannot comply with current standards and best practice for wastewater treatment and potable water supply. The report does not include an Appropriate Assessment of the potential effect of the proposed development on a European site.

The report recommends refusal for two reasons which are consistent with the decision of the Planning Authority.

The **first report** of the Council's Planning Officer (18/05/17) does not include a planning assessment, but recommended that **FURTHER INFORMATION** be sought including an assessment under A.6 of the Habitats Directive, revised proposals for discharge of treated effluent to an adequately sized percolation area on site in lieu of proposals to discharge directly into Carrowkeeran stream connected to a European site, and an Environmental and Construction Management Plan for the proposed development including the proposed infilling of the stream.

The **second report** of the Council's Planning Officer (09/10/17) does not include a planning assessment but recommends that **CLARIFICATION** of further information be sought including revised proposals to discharge treated effluent to an adequately sized percolation area, or to consider an alternative proposal for disposal of same (on site or to an alternative location), the submission of a NIS.

3.2.2. Other Technical Reports

Environment Section – The **final report** of the Council's Senior Executive Scientist (08/02/18) refers to concerns previously raised about the onsite wastewater proposals on site, including discharge to the Carrowkeeran stream which discharges to the European site and Clew Bay Designated Shellfish Area (note, the report does not constitute or include an Appropriate Assessment) and recommends that permission be refused for non-compliance with the EPA Code of Practice and consequential risk to public health from contamination of proposed onsite drinking water well supply.

The **first report** of the Council's Senior Executive Scientist (19/05/17) requested submission of (i) assessment under Article 6 of the Habitats Directive; (ii) revised proposals for discharge of treated effluent to an adequately sized percolation area on site; (iii) an Environmental Construction Management Plan, including the proposal to infill the stream (in this regard the ES also advised the applicant to consult with Inland Fisheries Ireland; and advised that a Trade Effluent Discharge License would be required).

The **second report** of the Council's Senior Executive Scientist (09/10/17) states '*as the competent authority under Article 6 of the Habitat [sic] Directive the Environment*

Section had determined that the Stage 1 Appropriate Assessment Screening has not successfully ruled out possible impacts on the SAC and therefore ... a Stage 2 Appropriate Assessment, Natura Impact Statement, is required'.

The report considered the response to wastewater treatment concerns to be inadequate in that the applicant did not submit details of the possibility of the discharge of treated effluent to an adequately sized percolation area on site.

It noted that Inland Fisheries Ireland considered the proposals to be acceptable, but the ES considered that that a revised ECMP was required as the submitted plan did not refer to IFI Guidelines. It also highlighted that the proposed development would require a Trade Effluent Discharge License to Surface Waters under the Local Government Water Pollution Act 1977-1990 to operate, with the preferred discharge option for the ES being to an adequately sized percolation area to groundwater, not direct to surface water.

Roads Design Office – The report of the Senior Executive Engineer (19/04/17) had no objection subject to 2no. conditions, including a non-standard condition requiring the details of the fill area over the stream to be submitted to the District Engineer for approval to ensure the adequate stream flood flow is allowed for.

3.3. **Prescribed Bodies**

Mayo National Roads Design Office – No issue for national roads (19/04/17).

3.4. **Third Party Observations**

None.

4.0 **Planning History**

Reg.Ref.P16/525 – Permission **REFUSED** by the Planning Authority (16/12/16) for a similar development proposal. The substantive reason for refusal was on grounds that the proposals for a potable water supply, within an area with an existing deficiency in provision of water supply, are inadequate and may pose a threat to public health. The application form indicated water supply as an existing connection and private well (not shown on site layout plan), but the applicant clarified over the

course of the application (25/10/16) that the supply was be from the mountain stream.

5.0 Policy Context

5.1. Development Plan

Mayo County Development Plan 2014-2010

The site is not zoned under the County Development Plan and is not covered by any Local Area.

5.2. Other reference documents

'Code of Practice: Wastewater Treatment Systems for Single Houses (p.e. ≤10)' (EPA, 2009)

'Wastewater Treatment Manuals: Treatment Systems for Small Communities, Business, Leisure Centres and Hotels' (EPA, 1999)

5.3. Natural Heritage Designations

Clew Bay Complex SAC Site no.001482 (c.300m to the north).

Features of Interest for which it is the Conservation Objective to maintain the favourable conservation condition comprise: habitats - Mudflats and sandflats not covered by seawater at low tide, Coastal lagoons, Large shallow inlets and bays, Annual vegetation of drift lines, Perennial vegetation of stony banks; species - *Phoca vitulina* (Harbour / Common Seal).

Features of Interest for which it is the Conservation Objective to restore the favourable conservation status comprise: habitats - Atlantic salt meadows (*Glauco-Puccinellietalia maritima*), *Lutra* (Otter), Embryonic shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes),

The status of *Vertigo geyeri* (Geyer's Whorl Snail) as a qualifying Annex II species for the SAC is currently under review, the outcome of which will determine whether a site specific conservation objective is set for this species.

The NPWS Conservation Objectives for Clew Bay Complex SAC do not include Conservations Objectives for, nor does it refer to Machairs (* in Ireland), Old sessile oak woods with Ilex and Blechnum in the British Isles.

6.0 The Appeal

6.1. Grounds of Appeal

The appeal submitted by Mary Coffee c/o David Mulcahy Planning Consultants Ltd includes an extensive detailed overview of the planning context, planning history, submissions of the applications and determination of the application by the Council, which I summarise below in advance of the summary of the actual grounds of appeal:

Context

- The existing vacant dwelling has no percolation area for its effluent.
- The stream forms the water supply for the community centre, a primary school, a public house, a hostel and cottages (operated by the applicant, permission re.ref.10/940 refers), and a bar and restaurant and local houses in the village.

Previous application Reg.Ref.16/525

- The proposed onsite WWTS discharging to the stream was not an issue in the previous application reg.ref.16/525 for a similar development, as reflected in the reason for refusal, and there was no issue with the principle of the proposed development.
- The reason for refusal related to provision of a potable water supply from Carrowkeeran stream. Independent water tests demonstrating treatment of water to potable standards, submitted 12/12/16, were not taken into account. The Planner's report indicated concern that a year-round source of water supply can't be guaranteed resulting in a risk to public health.
- Testing, carried out by Waterteck, of Carrowkeeran stream determined that water pressure to be 3.0 bar, sufficient to provide year-round supply (reg.ref.10/940 for hostel by current applicant). The pressure can be increase

to 3.5 bar through water storage. Conditions to reg.ref.10/940 required the applicant to enter into a s.47 agreement including, inter alia, the operation and maintenance of drinking water to ensure compliance with EU (Drinking Water Regulations) 2007 and required a discharge license to ground.

- Whilst the stream sometimes flows at low level during very warm periods, the flow is constant and never dries and the feeder pipe, set at the base of one of the pools which have formed at points on the stream, always maintains a flow.
- Water testing carried out in relation to treated water from Carrowkeeran stream at the applicant's hostel was found to pass all relevant criteria.
- Bacterial testing carried out by CLS in December 2016, following HSE verbal representations to the Area Planner that the applicant could not treat water to a potable standard, demonstrated that water can be treated to potable standard with the right treatment system (and forward to the HSE), but the results were not taken into account by the Planning Authority.

Policy context

- NFP 2040 recognises the significance of tourism to the rural economy and includes the objective (22) to facilitate tourism development, including blueways.
- Mayo County Development Plan policies: TM-01 supports / promotes sustainable tourism development; PY-01 encourages / promotes enterprise and employment development; E-03 encourages enterprise / employment in brownfield sites.

Proposed development

- The applicant's architect as clearly advised by the Council's Planning Officer that the potable water supply issue needed to be addressed in overcoming the reason for refusal, and it was agreed that provision of an onsite well would achieve this.
- S.1.5.2 of the Development Management Guidelines 2007 recommends that, in the case of a decision to refuse permission, *'the applicant is entitled to know all the relevant reasons for refusal: this will allow him/her to assess the*

prospects of a revised application or of an appeal to the Board, with (s.7.4) *'All substantial reasons for refusal stated since it is in the interest of proactive developers to be aware of all fundamental objections to their proposal'* should they intend lodging an amended application.

- The primary difference between the previous and current application is the provision of a well source water supply.
- Re-use of an existing structure to provide needed capacity to accommodate demand for food and beverages, is a significant planning gain, in a strategic location at the foot of Croagh Patrick on the ascent road, adjacent the public car park, on the Wild Atlantic Way, with a Greenway approved from Murrisk to Bertra Beach (construction to commence 2018).
- The BioCell-QuickOne and treatment unit with PL-UV disinfection system exceeds EU Guidelines for treatment levels of effluent (BioCell brochure appended to appeal), removing 98.1% BOD, 99.4% HH4 and 95,8% suspended solids and PL-UV disinfection system reducing faecal coliform levels by 99%.
- The BioCell brochure notes the WWTP provides efficient WWT for small communities and larger developments. Its advanced reactor technology treats wastewater to *"far higher than the required EPA standards"*, and it is highly effective at dealing with variable flows (typical of a commercial application). It is designed to EN12566-3.

Decision

- In response to requests for further information and clarification requests, the applicant:
 - Highlighted (as has been stated consistently since the start of previous application) that the site is not adequate to accommodate a suitably sized percolation area on site;
 - Dr O'Connor's report considered the BioCell system the best suited for the development but provides 4 options – (i) BioCell discharging to stream; (ii) ST discharging to Coco pods percolation / treatment to ground; (iii) ST with outfall connecting to existing public toilet

sewer; (iv) foul water connection directly to existing public toilet sewer.

- 75-250 persons estimated to visit the souvenir / coffee shop per day, with 2 staff – PE of 21.16.

- **The Stage 2 Appropriate Assessment notes:**

- A conventional ST and percolation is not an option due to small site size;
 - The existing discharge directly to the stream from a septic tank is ecologically and environmentally unacceptable;
 - The proposed PL-UV1 UV disinfection system reduces faecal coliform levels by 99% and exceeds EU Guidelines for treatment levels of effluent;
 - Seasonal variation of flow levels noted;
 - Clew Bay SAC is the only site relevant to Stage 2, the other Natura 2000 sites are too remote;
 - Key potential risks to protected habitats are runoff during construction and contamination from sewerage effluent;
 - The CMP has been designed to prevent suspended solids from entering the water system (appendix III);
 - The “*quality of the final effluent [from the proposed BioCell WWT and disinfection system] is extremely high with a very low probability of having any impact on the Clew Bay SAC QIs.*”
 - The nearest oyster farm is 1.3km distant and tidal movement will carry water from the stream away from the farm and out of Clew Bay;
 - If stream water did reach the farm, the “*resulting concentrations of bacteria in the water that reaches the farm will be extremely low*” due to dispersal and dilution, such as to be unmeasurable.
- The IFI had no concerns over the proposed small culvert in respect of fish. P.9 of Dr O’Connor’s report notes the bank of the river is very steep, is

occluded by shrubs and trees and impossible to fish and that such 'spate rivers' have only small numbers of brown trout and are considered an unimportant fishing resource.

- The Council's Planning Officer confirmed that option 2 as preferred but not ideal and that EPA standards could not be met. It was clear to the applicant's architect following a subsequent conversation that the Planning Officer was prepared to be flexible in terms of separation distances.
- The Site Characterisation Report noted at ground water protection response of R2¹ (acceptable subject to normal good practice), that the potential risk targets are groundwater and the stream, that T and P-values are within EPA CoP limits and concludes that the site appears suitable. A Solido Smart WWTS was recommended with a Premier Tech Ecoflow Tertiary Filter (CoCo Filter) with gravel bed. The manufacturer reports it to be a highly reliable system for all variations of water quality and flow intensity, with a compact design requiring up to three-times less space than conventional systems and is completely odourless, with zero energy demand.
- The Council's Environmental Section report considered the proposal not to meet the EPA standard of 15m between WWTS and percolation area [note, it is assumed the appellant is referring to the distance from the proposed well supply], putting water supply and public health at risk, with separation distance from the stream substandard the 10m requirement, as is the distance from the existing house and site boundaries.
- The ES report was produced on the last day of the application being decided and did not review the other 3 options submitted.
- No report issued from the HSE, despite their verbal advice being critical to prevision decided application, nor from Irish Water.

Grounds of Appeal

Reason no.1

- Reason no.1, concerning threat to public health due to risks of contamination of proposed on-site drinking source due to non-compliance of WWTS

proposals with EPA CoP, is in respect of Option 2 submitted by the applicant, specifically:

- *'the separation distance between the proposed wastewater treatment system and percolation area at 13m does not meet the required EPA distance of 15m'*;
 - Separation distance between percolation area and Carrowkeeran stream substandard the 10m EPA requirement;
 - Non-compliance with EPA separation distances from existing dwelling (café) and from site boundaries.
- The various other options put forward by the applicant were ignored by the Planning Authority, including the reports of the Planning Officer and the Environmental Scientist.
 - No weight was given to the replacement of the existing on-site WWTS which is currently posing a potential danger to both the stream (public health) and protected habitats in Clew Bay (and will continue to do so in the event of refusal), which would be completely eradicated by the proposed BioCell system.
 - Regarding reference in the Planner's report to P96/1920 (existing Visitor Centre to north) and the necessity to sink a well due to capacity issues with the WWTS during high rainfall periods, there is no documentary evidence that permission was sought or received for a well and the applicant's view is that there is not well on this site.
 - The applicant invites the Board to attach a condition requiring a discharge license, as was applied to the grant for her hostel nearby, which would require annual testing approved by the Council's Environment Section, ensuring the quality of the water supply poses no public health risk.
 - The applicant's expert ecologist, Dr O'Connor, supports the applicant's preference for the BioCell system discharging to stream.
 - There are no separation distances specified in the EPA's 1999 *'Wastewater Treatment Manuals – Treatment Systems for Small Communities, Business, Leisure Centres and Hotels'*, whereas the Council is relying on the EPA's

2009 CoP which relates to single dwellinghouses, which is entirely unreasonable.

- The site assessor advises that well separation is dependent on soil type (15m required); that distances from the boundary is most likely the least important of separation distances; and that no rock was encountered in the trial holes.
- Should the Board concur with the Council that option 2 is preferable, the separation distances referred to by the Council's Environment Section can be achieved with relatively minor alterations. An amended site layout, prepared by Project Design Architects, shows shed demolished, revised location of well and percolation area and relocation of water treatment facility in proposed storage structure.
- The revised layout for achieves 15m separation between percolation area and well; 10m between percolation area and Carrowkeeran stream, an improvement of 3m; the boundary distance relates only to public car park not to private use or to a dwelling.
- These changes could have been addressed by condition and are reasonable.
- In relation to separation distance from the café, there are no separation distance sin the EPA's 1999 manual for businesses.

Reason no.2

- Reason no.2 concerning potential impact on Clew Bay SAC and Clew Bay Designated Shellfish Area.
- An experienced and highly qualified ecologist, Dr Brendan O'Connor of Aquatech International Services Ltd., was employed to prepare the stage 2 Appropriate Assessment.
- The Stage 2 AA concludes that there is no material risk to Clew Bay in respect of protected habitats or oyster farms. The risk was found to be negligible.
- The Council dismissed the expert's findings with no apparent justification or reasoning.
- No weight was given to IFI's report raising no objection.

- Dr O'Connor considers the BioCell on-site wastewater treatment system involving treated effluent to the stream to be the ideal system for this site.
- The applicant wishes for the Board to grant permission on the basis of the original WWTS, fully supported by Dr O'Connor, but in the event the Board prefer the second WWTS option, discharging to ground, the EPA separation distances can be achieved with the revised layout plan.

6.2. Planning Authority Response

The main points of the Planning Authority's response (06/04/18) to the appeal may be summarised as follow:

- Uphold the decision of MCC.
- The elements of the water supply and wastewater treatment proposals differ between this and the previous application.
- Regarding s.2.8 of the Development Management Guidelines, the refusal reason to P16/525 was clear but the assessment of the applicant's proposals to overcome this refusal under the current application highlighted new issues which could not be resolved, resulting in refusal for two clearly stated reasons. Mayo has complied with the provisions of the DMG.
- All correspondence between the Council and the applicant was given in the spirit of trying to resolve the issues.
- WWT option 2 was considered most appropriate of the 4 options, with discharge to ground. Options 3 and 4, entailing connection to a public toilet wastewater sewerage system, are not viable as it is not a public sewerage scheme but a system designed for the public toilets.
- The fundamental aspect of reason no.1 was the risk of contamination of the proposed on-site drinking water resource. The applicant has submitted no details to demonstrate that the risk has been averted by the revised proposal.
- As the competent authority, Mayo County Council concluded that the details submitted do not adequately demonstrate the proposed development will not

have a significant impact on Clew Bay SAC and Clew Bay Designated Shellfish Area.

7.0 Assessment

As there was no issue with the principle of the proposal in terms of land use planning, nor in terms of visual impact or impact on local amenities, I consider the main issues arising under this appeal may be addressed under the following headings:

7.1 Water quality issues

7.2 Appropriate Assessment

7.1. Water quality issues

- 7.1.1. The application site is located within a dispersed rural coastal village to the west of Westport. The site, many of the neighbouring premises and possibly the entire settlement has no access to public wastewater and treatment disposal system, or to a public potable water supply. The water quality issues are interrelated between the wastewater disposal and water supply proposals, with the former also directly related to the issue of potential significant effects on a European site.
- 7.1.2. The applicant proposes to service the proposed commercial development (change of use to café and souvenir shop) within the existing dwellinghouse, with a potable water supply via an onsite well, and wastewater disposal via an onsite WWTS discharging to surface water (Carrowkeeran stream). A similar development proposal, but which included provision of a water supply from the said stream, was refused permission (under reg.ref.16/525) by the Planning Authority on grounds of that the water supply proposals were inadequate and may pose a threat to public health. The provision of an onsite well water supply is intended to resolve the reason for refusal under the said previous application.
- 7.1.3. The application site is of quite restrictive size, stated as 0.049ha and measured mean site dimensions of c.16.6m (W-E) x c.23m (N-S), which poses a difficulty in accommodating an onsite WWTS, further exacerbated by the need to provide a private water supply from within the site.

- 7.1.4. The applicant submitted calculations for the wastewater effluent likely to be generated as clarification of further information (15/11/17) based on visitor attraction figures of between 75 (weekday) to 250 (weekend days) persons per day, with 2 staff, at 21 PE (population equivalent¹). Whilst the estimated PE is consistent with the wastewater loading rates for restaurants at amenity sites (table 3 of the EPA's 1999 *Wastewater Treatment Manual* for small communities) based on estimated visitor numbers, the applicant has provided no justification for estimated visitor numbers or consideration of how they may vary and peak throughout the year. This is critical given that the summer visitor peak period will coincide with low water flows in Carrowkeeran stream² into which it is proposed (applicant's preferred option) to discharge treated effluent.
- 7.1.5. The original wastewater treatment proposal submitted with this application was for a Euro-Bio 24 WWTS discharging to Carrowkeeran Stream, with water supply from an onsite well. This proposal is illustrated in the site layout and other plans submitted with the application (Drawing G11-PL-03, and Euro-Bio 24 15000L tank drawing, 28/03/17). No brochure for the Euro-Bio 24, produced by 'Ireland Waste Water', has been submitted, but the tank drawing indicates a capacity of 26PE. This option was not acceptable to the Planning Authority on the basis that the development, which the Council noted would require a Trade Effluent Discharge License to operate, would entail discharge to Carrowkeeran stream. The Council was concerned about the assimilative capacity of the stream to accommodate the discharge, including having regard to the discharging of that watercourse into the Clew Bay Complex SAC (and Designated Shellfish Area) c.300m downstream. The applicant was requested (19/05/17 and again on 09/10/17) to submit, *inter alia*, revised proposals for a WWTS discharging to ground via a percolation area and an appropriate assessment.
- 7.1.6. The applicant submitted (11/08/17) an AA stage 1 screening report by Dr O'Connor (Aquafact), based on the installation of a BioCell-QuickOne+ treatment unit with a PL-UV1 UV disinfection system to treat the domestic waste, discharging to

¹ Population equivalent, conversion value which aims at evaluating non-domestic pollution in reference to domestic pollution fixed by EEC directive (Council Directive 91/271/EEC concerning Urban Waste Water Treatment) at 60 g/day related to BOD5.

² Email on file from Dr O'Connor 11/07/19 to John Conneely of IFI states '*In Summer, the flow can be very low*'.

Carrowkeeran stream. No revised drawings were submitted showing the revised system, either in context of a layout plan or dimensional drawings of the system itself, either attached to the BioCell brochure or separately. The drawings attaching to the brochure are in respect of systems of 8PE or less (not at a useable scale) and are not relevant. The BioCell system is produced by a different company to that producing the Euro-Bio 24 WWTS. Compliance with separation distances cannot therefore be to be determined for this model of WWTS. The quotation from BioCell (appendix 1 of FIR) indicates that the proposed system would have a maximum PE of 22.

- 7.1.7. In response to a request for clarification of further information (09/10/17), the applicant (cover letter by Project Design 15/11/17) further clarified that it was proposed to install a BioCell-QuickOne+ treatment unit with a supplementary PL-UV1 UV disinfection system which '*exceeds EU Guidelines for treatment levels of effluent*', as 'option 1'. The submitted drawing (G11 PL-050, Option 1 – On Site Treatment System), indicates a Euro-Bio 24 WWTS as originally proposed.
- 7.1.8. In her appeal, the applicant requests the Board to grant permission on the basis of the original WWTS, which '*has the full support of Dr. O'Connor*'. However, the original WWTS (Euro-Bio 24) is not the system (BioCell etc) considered and supported by Dr O'Connor's assessment. Based on the information on file and available online, it is not clear to me that two treatment systems are equivalent, even disregarding that the latter WWTS included additional treatment before discharge that does not form part of the original WWTS proposal.
- 7.1.9. The Planning Authority and the Council' Environmental Section assessed the WWTS against the EPA's Code of Practice (2009). The proposed Euro-Bio 24 would be located less than 4m from the Carrowkeeran stream, which forms the potable water supply for a number of premises downstream, including a hostel operated by the applicant, compared to the 10m minimum required under the CoP³. The tank could be relocated westwards and reoriented (along a N/S axis) to achieve the minimum 10m distance from the Carrowkeeran stream, but it would fall foul of minimum 3m distance requirement from the site boundary. The appellant implies that the distance

³ The plans do not appear to be based on an accurate and detailed topographical survey of the stream and I have based the separation distance from the edge of the culvert.

from the boundary is not significant in this instance as the site abuts a public car park and not to private use as a dwelling. The CoP makes no distinction in this regard, stating (s.6.2.1) that '*minimum separation distances ... apply to all on-site domestic wastewater treatment systems. If any of these requirements cannot be met, on-site domestic wastewater systems cannot be developed on the site.*'

- 7.1.10. The EuroBio 24 would be c.2.5m from the proposed café building. A 7m minimum distance between any dwelling house and septic tank applies under the CoP. The CoP sets no minimum distance from any other building type. In the circumstances the Board may consider it reasonable to have some regard to the said separation distance given the nature and intensity of the use by the public. It is assumed that surface water runoff from the café would be collected and discharged to the Carrowkeeran stream rather than to a soakaway (no details indicated on drawings) and therefore there would be no need to achieve a 5m separation distance from a soakaway (this should be addressed by condition should the Board decide to grant permission). The original WWTS proposal (EuroBio 24) is not compliant with the CoP in terms of separation distances.
- 7.1.11. As no dimensional drawings of BioCell-QuickONE+ treatment unit and disinfection system have been submitted, including on a site layout plan, it is not possible to determine the separation distances for this model. Assuming it is of similar dimensions to the EuroBio 24, the system cannot comply with the CoP in terms of separation distance.
- 7.1.12. In response to requests for further information (19/05/17 and 09/10/17) the applicant submitted 4no. alternative effluent treatment options (as clarification of further information, 15/11/17), including an effluent treatment system with percolation area discharging to ground (option 2, drawings G11 PL-051 – this drawing is slightly out of scale), which is the Planning Authority's preferred option. Two other options (3 and 4) which entail connecting to the public toilet sewer either indirectly via an onsite septic tank, or directly, were reasonably discounted as not acceptable to the Planning Authority on the basis that it is not a public sewerage scheme. Option 2 comprised a Streamline BAF Treatment System discharging to 2no. coco pods percolation / treatment to ground (brochures for both are attached to the clarification of further information). The proposed layout for the Streamline BAF does not achieve the minimum separation distances under the CoP table 6.1 and the

additional separation distances under table B.3 of Annex B Groundwater Protection Response and I would anticipate that relocating the system to achieve separation distances from watercourses and wells would encroach on separation distance from boundaries and from the café building. The Planning Authority (there was no report from Environmental Services) raised no issue in this regard but requested the applicant to submit a site suitability assessment, carried out as per the EPA CoP, stating '*that option 2 is the only acceptable option*'.

- 7.1.13. The applicant submitted a site suitability assessment as further clarification of further information on 15/01/18. On the basis of this assessment and a letter from WasteWater Solutions (recommending a Solido Smart EBL99 WWTS (25PE) and a Premier Tech Ecoflo Tertiary Filter with gravel bed of 7.09m X 25.17m x 0.125m (=22.18m³)) the applicant submitted a brochure of yet another WWTS (Solido Smart SBR-Treatment system). This WWTS requires a significantly altered site layout, as indicated in drawings (not to scale) by Langan CE attached as appendix C of that submission. It is apparent that this revised option would not meet all the minimum separation distances under the CoP.
- 7.1.14. The appellant acknowledges that it is not possible for a WWTS with percolation area (option 2) to meet all the separation distances under the CoP and invites the Board to grant permission to include 'option 1' subject to a condition requiring a discharge license, as was applied to the grant for her hostel nearby, which would require annual testing approved by the Council's Environment Section, ensuring the quality of the water supply poses no public health risk. I would agree with the appellant that 'option 1' is the best solution on this restricted site. Should the Board decide that this option is appropriate, I would recommend that a condition be attached requiring a TED Licence to be received by the applicant and submitted to the Planning Authority prior to the commencement of development.
- 7.1.15. However, in the event that the Board concurred with the Planning Authority that option 2 is preferable, the appellant submitted a further revised version of option 2 (G11-PL-22) with the appeal. The revised layout provides a septic tank (model not specified but indicated to meet EN 12566-1) and percolation (sand filter) of 7.7m x 3.3m located at the northwest corner of the site (the existing shed to be removed and the proposed drinking water treatment plant to be relocated to the eastern shed). In terms of complying with required separation distances, the percolation area would be

substandard the 3m separation distance from site boundaries and, possibly, the 4m required from slope break / cuts as the neighbouring lands appear to be lower than the site⁴. The septic tank and percolation area would also be within 2m of the café building, compared to 7m and 10m separation distances, respectively, that apply from any dwelling house under the CoP. Whilst I would acknowledge the appellant's position that the existing dwelling is currently facilitated by a septic tank without secondary treatment which is substandard the requirements of the CoP, the existing dwelling has a effluent treatment demand of only 4PE of 4, compared to a stated PE of 21.16 for the proposed development, and the potential health risks associated with a less intensive domestic use would be expected to be more easily resolved.

7.1.16. The Council considered the applicant's wastewater treatment proposals against the EPA's 2009 '*Code of Practice: Wastewater Treatment Systems for Single Houses (p.e. ≤10)*'. The appellant submits that the proposed development should have been considered by the Planning Authority, and should be considered by the Board, against the EPA's 1999 '*Wastewater Treatment Manuals: Treatment Systems for Small Communities, Business, Leisure Centres and Hotels*'. The said document is intended to apply to developments of between 10 to 500 p.e., but advises that other manuals in the series, including treatment systems for single houses, should be consulted (referring specifically to the site characterisation form from the manual on treatment systems for single houses, which is updated in the CoP). The CoP 2009 is therefore relevant.

7.1.17. S.3.9 of the Manual includes (table 4) recommended separation distances between a proposed system from '*existing development*' (to avoid noise and odour nuisance). Based on a submitted PE of 21.16, a separation distance of 28m applies. The manual is unclear as to what it means by existing development, but s.3.9 would seem to be concerned particularly with residential development. It would seem excessive to apply a separation distance of this scale to a non-residential development on or off site (the adjacent development is a large public toilet), although the Board should be cognisant that the Manual applies to WWTS designed to treat larger quantities of effluent compared to the CoP which is limited to systems

⁴ The difference in levels between the site and external lands to the north and west are unclear as no surveyed levels are indicated. This would apply to any of the above mentioned WWTS where the separation distance from the site boundaries cannot be achieved.

of 10PE or less. In the context, I consider the CoP provides a more reasonable guide to appropriate separation distances.

- 7.1.18. As noted above, I am not satisfied that the applicant has justified the PE demand likely to be generated at this amenity site, particularly over a prolonged summer peak period. In this regard, the said manual notes *'in small scale systems, flows greatly in excess of the DWF are common, making it necessary to consider peak flows and the variations of wastewater flow; these flow variations can occur during a day, week or may be seasonal.'* In this instance, where it is proposed to discharge to a small stream, the low flow of which will coincide with peak wastewater effluent demand in terms of PE, which would be potentially much higher than that estimated by the applicant.
- 7.1.19. Based on the information on file, the various wastewater treatment proposals to accommodate this high intensity commercial use, at a nationally important amenity, on a site of very restricted size adjacent a watercourse used for water supply downstream, are not demonstrably in compliance with the relevant wastewater treatment requirements and for which the PE demand has not been justified, nor the peak summer demand transparently considered, would therefore be prejudicial to public health and contrary to the proper planning and sustainable development of the area.

7.2. **Appropriate Assessment**

- 7.2.1. Clew Bay Complex SAC (001482) is located c.300m downstream of the application site and is connected thereto via the Carrowkeeran stream. No other European sites are relevant. I've set out the Features of Interest and Conservation Objectives pertaining to that site under s.5.3, above.
- 7.2.2. The proposed development is not required for the management of the European site. The Planning Authority carried out no formal appropriate assessment screening or Appropriate Assessment of the proposed development.
- 7.2.3. The applicant submitted a stage 1 appropriate assessment screening report (11/08/17) and a stage 2 Appropriate Assessment report (15/11/17), both of which were prepared by Dr. O'Connor of Aquafact International Services Ltd. Dr O'Connor is referred to as an expert ecologist by the appellant, but the reports provide no

details of his qualifications or area of expertise to support his assessment. Details on the Aquafact website states that he '*specialises in the biology and ecology of water-floor communities*'.

- 7.2.4. As the site is located at a distance to the European site the proposed development will have no direct effects on habitats within the European site. The application site would not appear to have any habitats or species functionally related to the habitats, being Features of Interest, within the European site, and therefore there would be no potential for significant effects on the European site in this regard. Dr O'Connor screened out potential for effects on Annual vegetation of drift lines, Perennial vegetation of stony banks, Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*), Embryonic shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes), Machairs (* in Ireland), Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles and *Vertigo geyeri* (Geyer's Whorl Snail) '*as either not present at the site or where they are present within the SAC, are too remote from it to be affected*'.
- 7.2.5. The potential effect on *Lutra lutra* (Otter) was rated negligible on the basis that the area is heavily used by tourist in summer and at weekends, at which times the likelihood of Otter being present at the site is very unlikely and, given that the small stream is an unimportant fishery resource, it will not be used by Otter for foraging.
- 7.2.6. There is potential for indirect effects on Features of Interest within the European site as the development site (source) is hydrologically linked to the European site (receptor) via the Carrowkeeran stream (pathway), which acts as a pathway between the site (source) and the European site. In this regard Dr O'Connor considered there to be potential for the development to indirectly effect Features of Interest of the SAC comprising Mudflats and sandflats not covered by seawater at low tide, Coastal lagoons, Large shallow inlets and bays, and *Phoca vitulina* (Harbour / Common Seal), through impacts on water quality arising from the sewage treatment plant and considered these effects in a stage 2 Appropriate Assessment. He concluded that the proposed development, at 300m away, is too distant to have any impact on these species and that the final effluent (based on the BioCell-QuickONE+ treatment system and PL-UVL UV disinfection system) reduces faecal coliform levels by 99%, with an extremely high quality of final effluent, with a very low probability of any effect on the European site Features of Interest. Regarding potential for in-combination

effects, Dr O'Connor, having reviewed the Council's online planning facility, considered there to be no projects with potential to interact negatively with the proposed development.

- 7.2.7. Carrowkeeran stream enters the Clew Bay Complex SAC within the transitional waters. The quality of the transitional water is rated High at this location; the more distant coastal waters are rated Good and groundwater quality underlying the site is rated Good under the WFD Status 2010-2015, (no updated status is available). Neither the Carrowkeeran stream, nor any other watercourse running from the northern slopes of Croagh Patrick (between Oldhead to the west and Killadangan to the east) have been assigned a status under the WFD. The applicant submitted water quality testing results of the treated water supply downstream of the site, serving the applicant's hostel facility, but no testing of the untreated water quality for the watercourse have been submitted.
- 7.2.8. Based on the final proposed WWTS layouts for 'option 1', I have determined that it is possible for the proposal to comply with the 10m separation distance from the Carrowkeeran stream by relocating the proposed BioCell-QuickONE+ and UV disinfection treatment system westwards, although not without compromising other required separation distances; option 1 would entail discharge to watercourse that would be subject to a TED License, providing an additional layer of protection. This would be particularly important were the effluent generated by the proposed use be higher than the 21.16PE calculated by the applicant. I therefore do not consider the proposed development, inclusive of WWTS option 1, to be likely to significantly affect the European site, having regard to the Conservation Objectives relating to the Features of Interest for which that site has been designated.
- 7.2.9. Regarding 'option 2', the percolation area can meet the 10m distance, but not without falling short on other distance requirements, and the septic tank would be well below the 10m requirement and would therefore pose an increased risk of pollution of the watercourse and the SAC downstream. The proposed system would discharge to ground and the final effluent would not be subject of a TED License and the increased safeguards that that would provide. Given the c.300m separation distance to the SAC, discharging at a point where transitional waters are area as of high quality, notwithstanding that the Carrowkeeran stream has not been rated, it would seem highly unlikely that a development of the scale proposed, with the

WWTS proposed, would have any significant effect on the European site, having regard to the Conservation Objectives relating to the Features of Interest for which that site has been designated.

- 7.2.10. Whilst the issue of potential impact on a Designated Shellfish Area falls outside the scope of Appropriate Assessment, it is opportune to refer to this issue here given the overlap with the European site. Dr O'Connor addressed the potential for the proposed development to impact on the said area and concluded that, on the basis of the proposed BioCell-QuickONE+ treatment system and PL-UVL UV disinfection system and the distance of the proposed development from the nearest shellfish production location (1.3km), the resulting concentrations of bacteria in the water reaching the shellfish farm will be so low as to be unmeasurable and will not be compromised by the proposed development.
- 7.2.11. As noted above, I am not satisfied that the applicant has justified the level of effluent predicted to be generated by the proposed development in terms of PE. Option 2, with discharge to ground, would not be subject to a TED license and therefore any significant excess in (predicted PE) effluent generated on site, which may not be effectively treated by the proposed WWTS option 2, would pose a risk to ground waters and possibly surface waters nearby that would not be regulated through a licensing system. However, notwithstanding this concern, I still consider it highly unlikely that the proposed development inclusive of WWTS option 2, would have any significant effect on the European site, having regard to the Conservation Objectives relating to the Features of Interest for which that site has been designated, alone or in-combination with other plans and project in the vicinity.
- 7.2.12. I consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European site No.001482, or any other European site, in view of the site's Conservation Objectives.

8.0 Recommendation

- 8.1. I recommend that permission be **REFUSED** for the reason(s) set out under section 9.0:

9.0 Reasons and Considerations

Having regard to the nature, scale and intensity of the proposed commercial use and the wastewater effluent demand generated thereby, which is considered likely to significantly exceed the level estimated by the applicant (p.e. 21.16) during the summer peak period, which would coincide with low water flow period in the Carrowkeeran stream traversing the site, which supplies potable water to properties downstream and into which it is proposed (option 1) to discharge treated wastewater effluent, and having regard to the uncertainty concerning the actual wastewater treatment system proposed, on a site that cannot accommodate wastewater treatment system in compliance with the '*Code of Practice: Wastewater Treatment Systems for Single Houses (p.e. ≤10)*' (EPA, 2009) due to its restricted size, the proposed development would be prejudicial to public health and contrary to the proper planning and sustainable development of the area.

John Desmond
Senior Planning Inspector

27th July 2018